2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the federal Water Pollution Control Act, more commonly referred to as the CWA (33 U.S.C. 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S Army Corps of Engineers (USACE) with oversight by U.S Environmental Protection Agency (EPA).

USACE issues two types of 404 permits: General and Individual permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S EPA's Section 404(b)(1) Guidelines (EPA 40 Code of Federal Regulations Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by EPA in conjunction with USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is an LEDPA to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the SWRCB, RWQCBs, and CDFW. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by WDRs and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities that may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. See Section 222, Water Quality, for more details.

State of California Fish and Game Code Section 1602 requires any person, state, or local government agency, or public utility proposing a project that may affect a river, stream, or lake to notify CDFW before beginning the project. If activities will result in the diversion or obstruction of the natural flow of a stream; substantially alter its bed, channel, or bank; impact riparian vegetation; or adversely affect existing fish and wildlife resources, then a Streambed Alteration Agreement is required.

A Streambed Alteration Agreement lists the CDFW conditions of approval relative to the project, and it serves as an agreement between an applicant and CDFW for a term of not more than 5 years for the performance of activities subject to this section. A CDFW Streambed Alteration Notification is required for all activities potentially affecting streambeds and/or their associated riparian habitats. Subsequently, implementation of the project may require a 1602

Streambed Alteration Agreement if these areas are determined to be jurisdictional by CDFW. A Streambed Alteration Agreement will be required for potential impacts to drainages within the study area.

This project is part of the OCTA M2 Environmental Mitigation Program in which a programmatic individual permit was obtained in December 2017. The permit (File No. SPL-2012-00830-VCL) establishes Letter of Permission procedures and was issued to OCTA and Caltrans. This permit also approves a suite of permittee responsible compensatory mitigation that is available to offset unavoidable impacts to waters of the U.S.

2.3.2.2 Affected Environment

This section has been prepared based on the analysis and findings presented in the following technical studies and associated errata:

- *Natural Environment Study* (June 2016)
- *Natural Environment Study Errata* (June 2018)
- *OCTA Measure M2 Freeway Program Final Jurisdictional Delineation Report* (November 2012)

The BSA for the project includes I-405 plus a 50-foot buffer from the ROW edge (or the outer limits of the work area) and a 500-foot buffer upstream and downstream of I-405 at both San Diego Creek crossings (North and South).

Jurisdictional Delineation Methodology

Potential waters of the U.S. and wetlands were delineated using methods established in the Wetland Delineation Manual (Environmental Laboratory, 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE, 2008a), A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States (USACE, 2008b), and Draft Guidance on Identifying Waters Protected by the Clean Water Act (USACE/EPA, 2011). Non-wetland waters were delineated based on the presence of OHWM indicators, and OHWM data sheets were recorded where appropriate (i.e., named blue-line features [lakes, streams, irrigation ditches, and other hydrographic features as depicted on USGS topographic maps]). At each evaluation area, several parameters were considered to determine if the sample point was within a wetland. Three criteria normally must be fulfilled to classify an area as a jurisdictional USACE wetland: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology.

The evaluation of SWRCB/RWQCB jurisdiction followed guidance from Section 401 of the CWA and typically followed the same jurisdictional areas as those used by USACE. CDFW jurisdiction typically includes water features with a defined bed and bank. The evaluation of potential jurisdictional areas was determined using guidance that was provided in consultation with CDFW 1600 staff. Briefly, CDFW jurisdiction was delineated by measuring outer width and length boundaries of potential jurisdictional areas (lakes or streambeds), consisting of the greater of either the top-of-bank measurement or the extent of associated riparian or wetland vegetation.

In 2012, a programmatic Jurisdictional Delineation of water resources was performed as part of the OCTA Measure M2 Freeway Program, which includes the area of the proposed project. An Addendum was prepared to update conditions along San Diego Creek where it crosses I-405 south of SR-133. As part of this project, additional field verification of the jurisdictional mapping in April 2015 concluded that the features identified in the programmatic Jurisdictional Delineation and Addendum represent the current conditions within the BSA, with one minor extension of a non-wetland waters of the U.S. feature. Caltrans approved use of the programmatic Jurisdictional Delineation and Addendum for the project in August 2015. It should be noted that evaluation of jurisdictional features did not include the entire BSA; it was generally limited to the project impact areas. It also included some areas that are outside the BSA.

A total of 67 separate features were observed and documented within the BSA of the proposed project. Of these, 59 features were determined to be subject to CDFW jurisdiction. All 67 features were determined to be waters of the U.S. and subject to RWQCB jurisdiction. More than 80 percent of the features within the BSA are concrete-lined and unvegetated. A total of 10.672 acres of waters of the U.S. and 0.897 acre of wetlands under USACE/RWQCB jurisdiction were mapped for the project. A total of 25.300 acres of streambed and 1.018 acre of riparian habitat under CDFW jurisdiction were mapped for the project. Figure 2.3.2-1 (Sheets 1 through 8) shows the locations of the potential jurisdictional areas. The jurisdictional area for each drainage is shown below in Table 2.3.2-1.

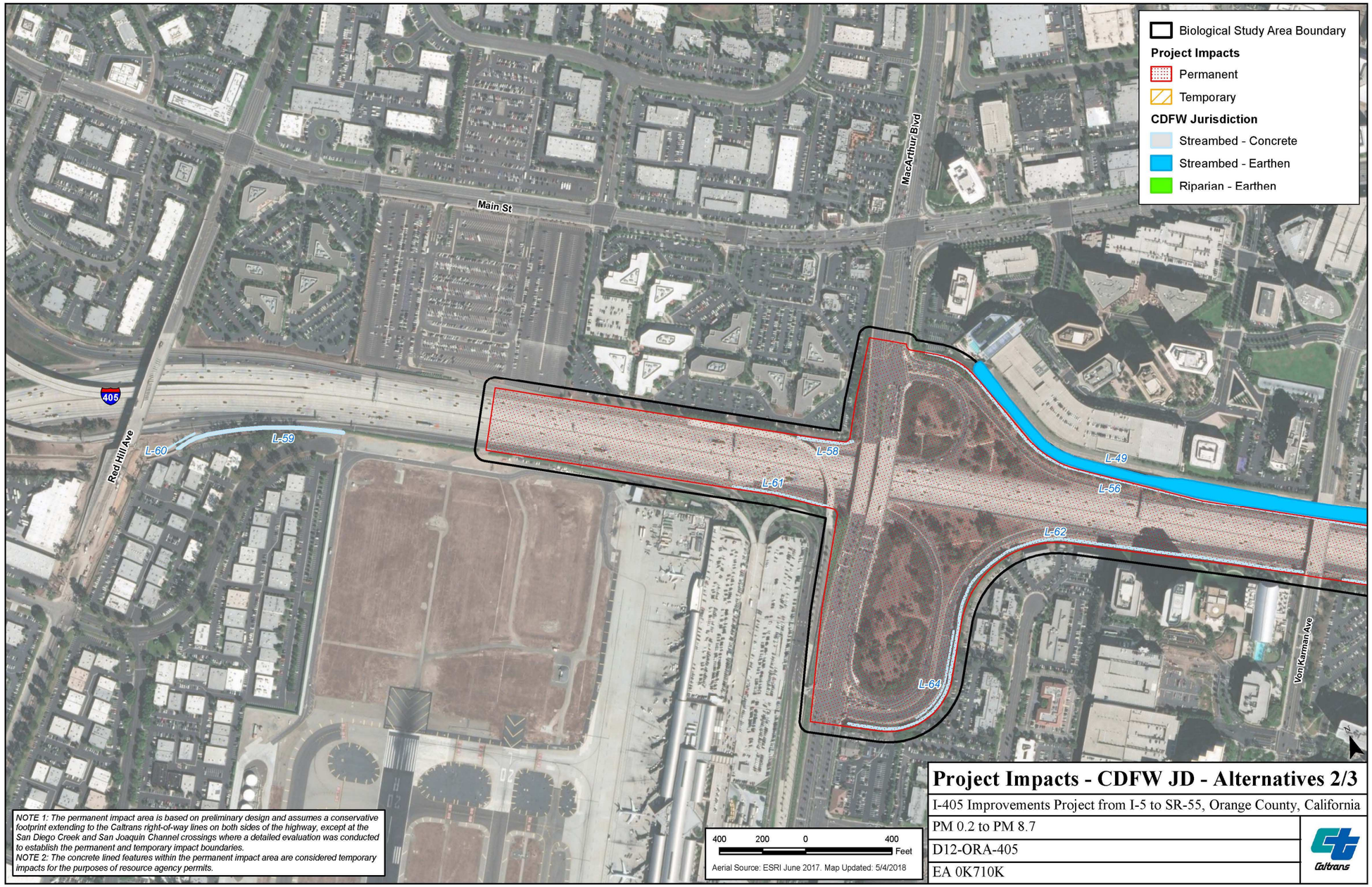

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 1 of 16)

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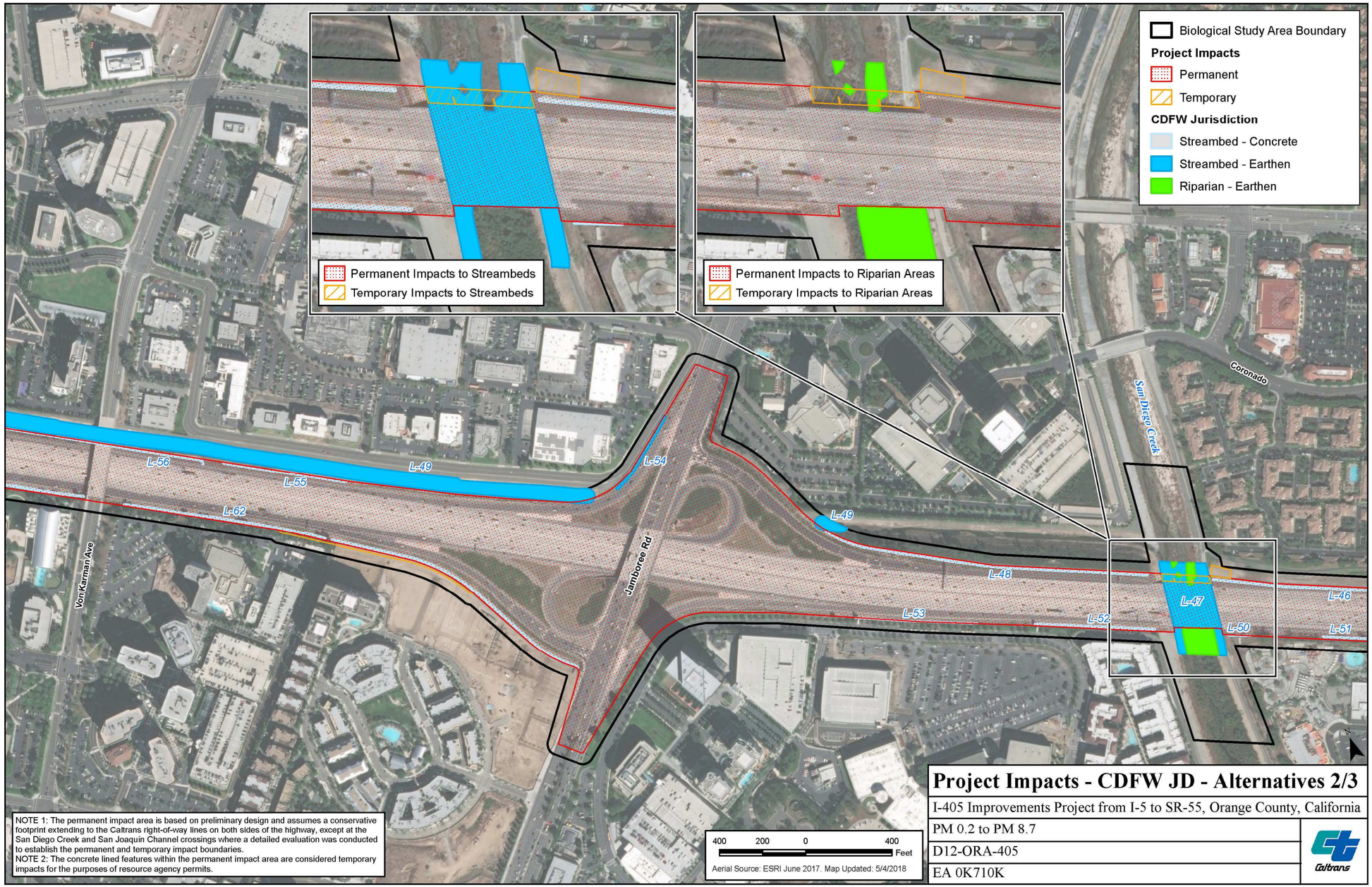

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 2 of 16)

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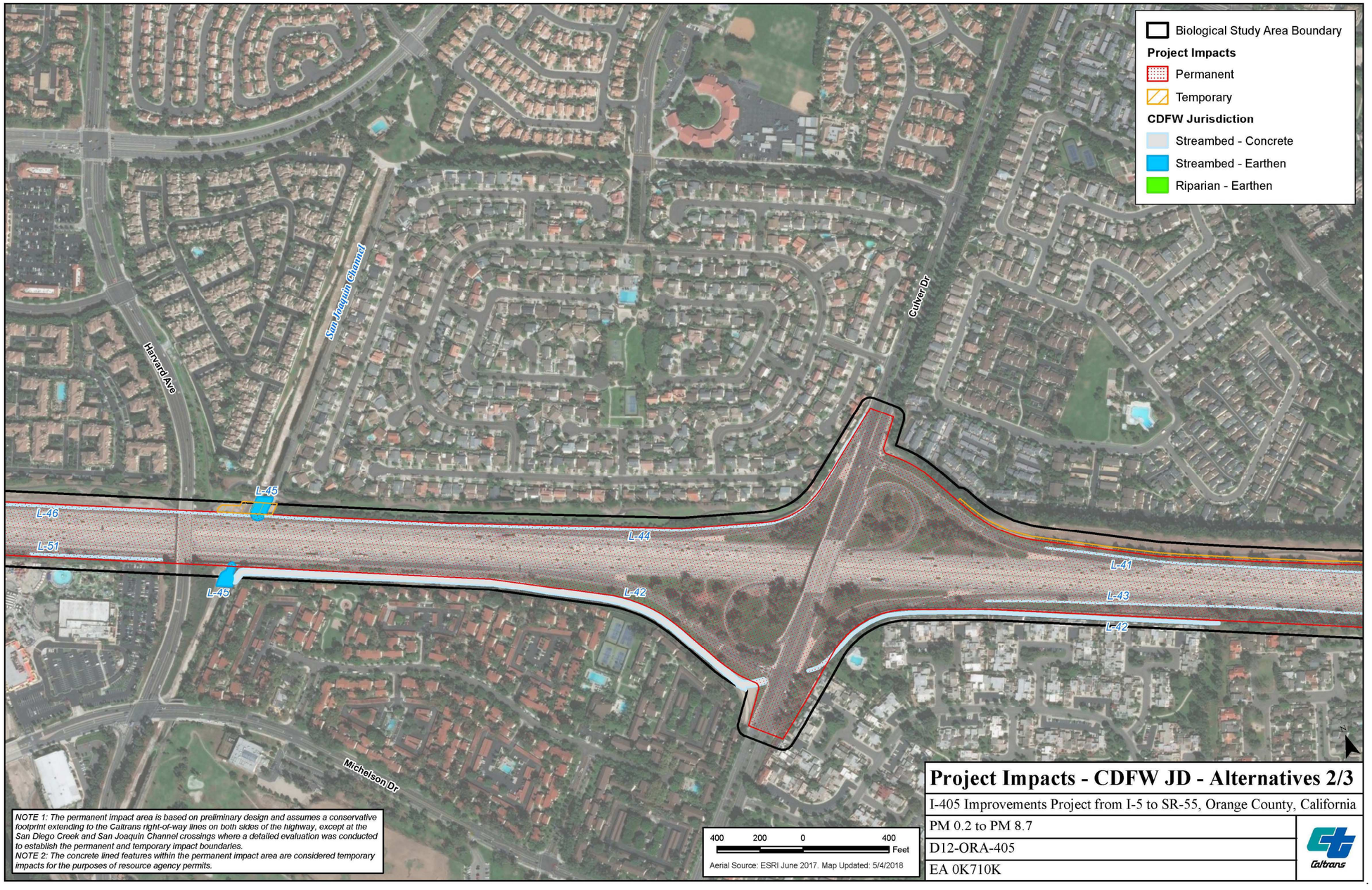

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 3 of 16)

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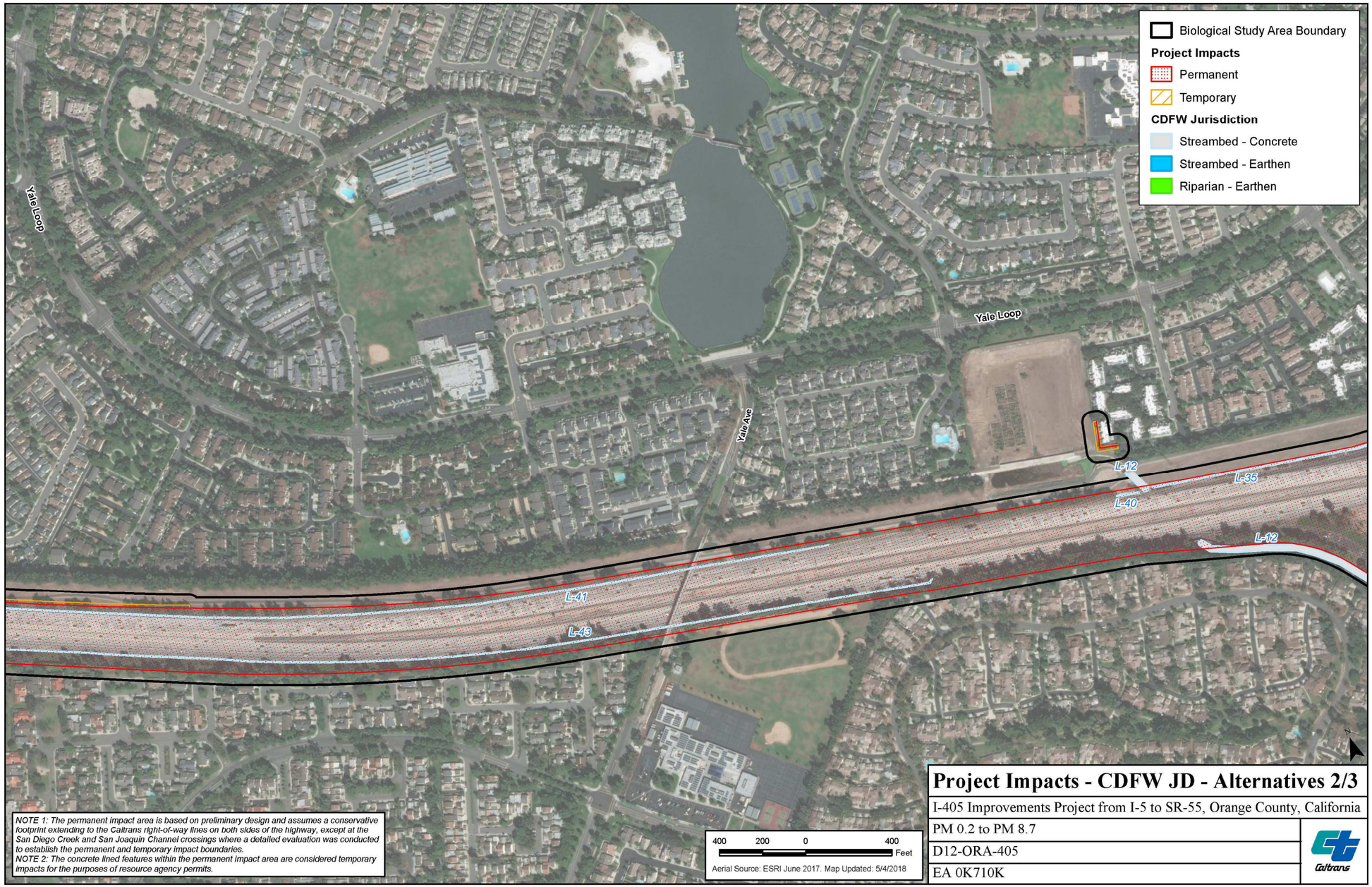

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 4 of 16)

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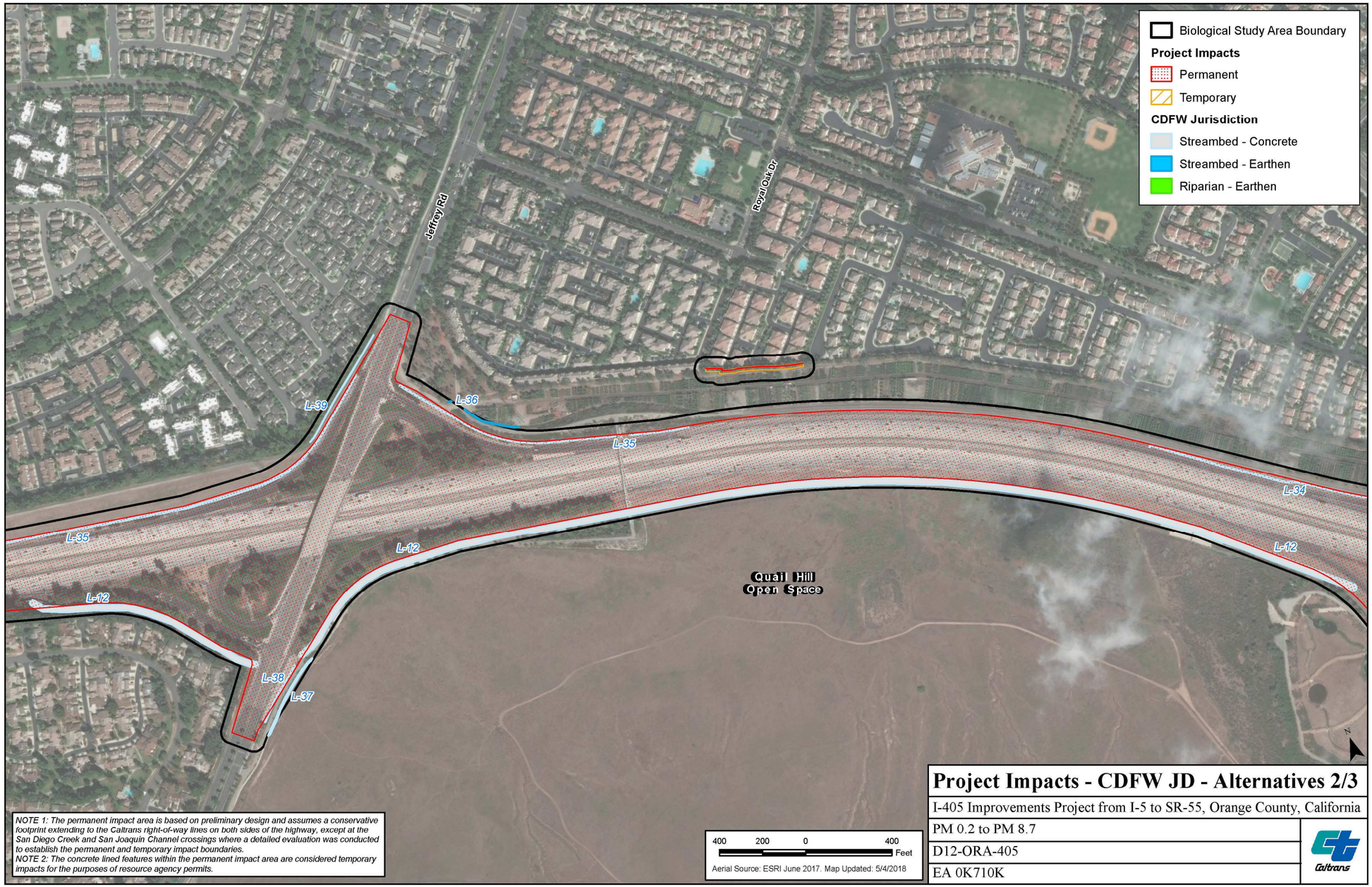

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 5 of 16)

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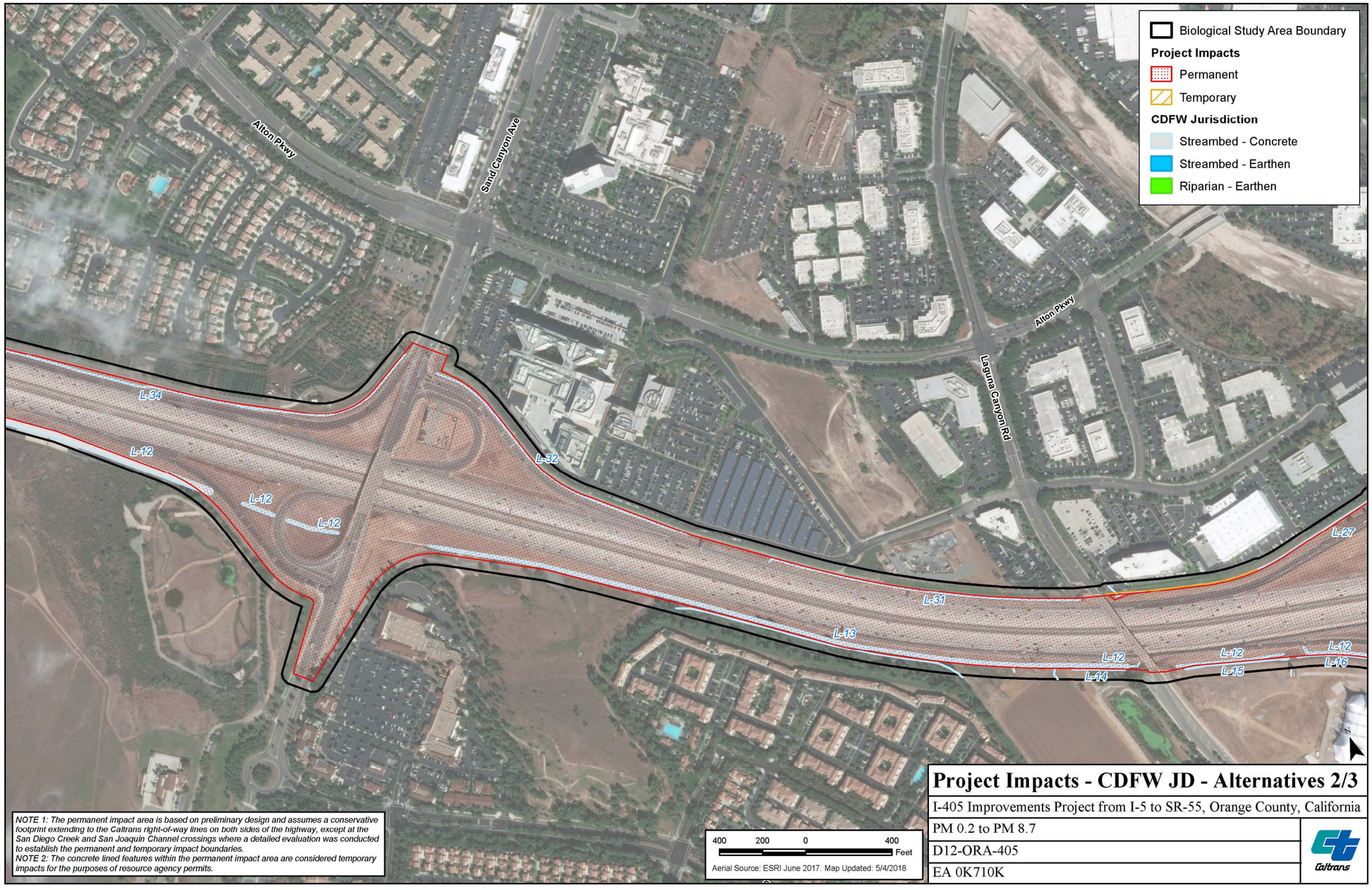

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 6 of 16)

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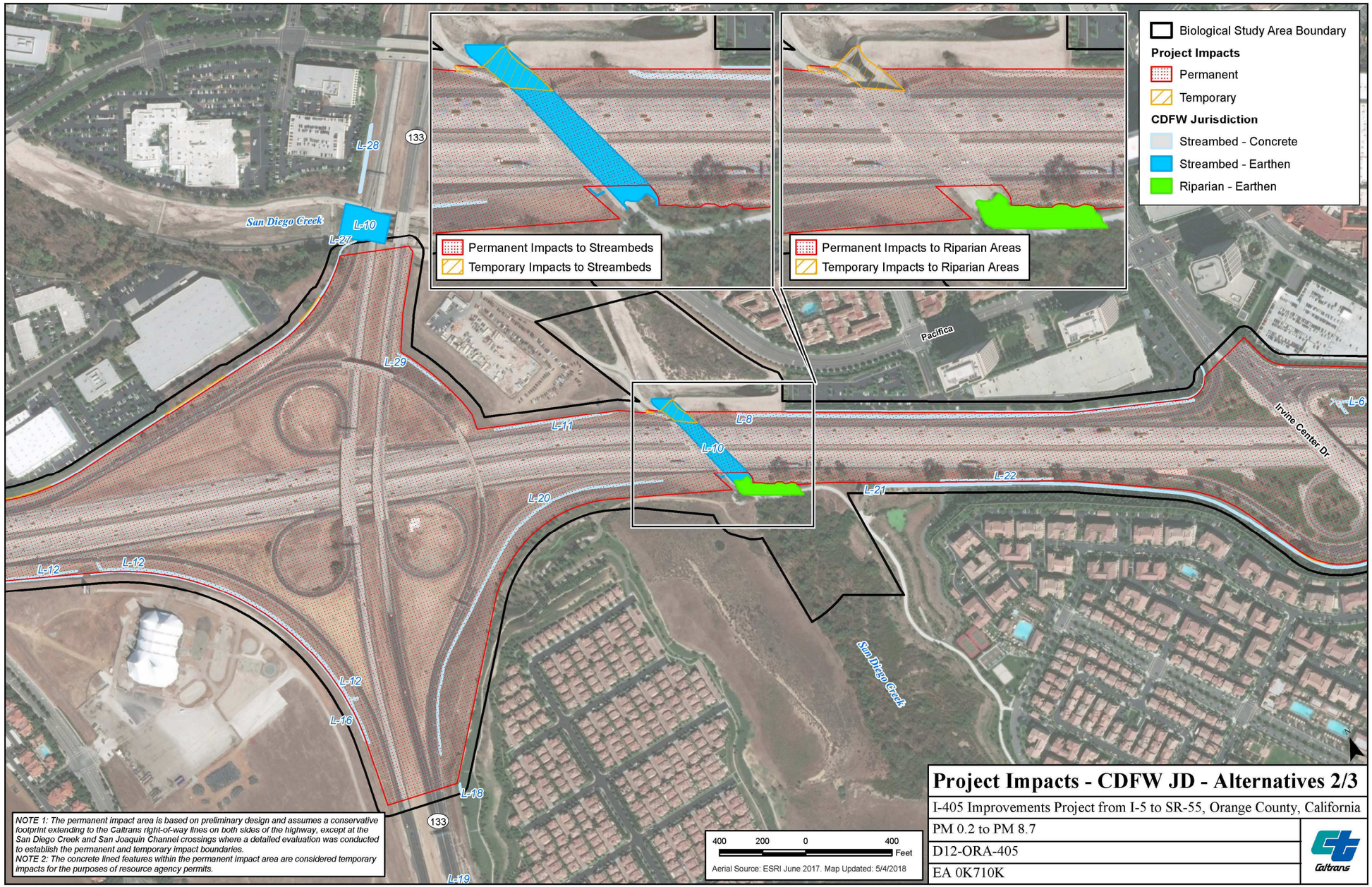

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 7 of 16)

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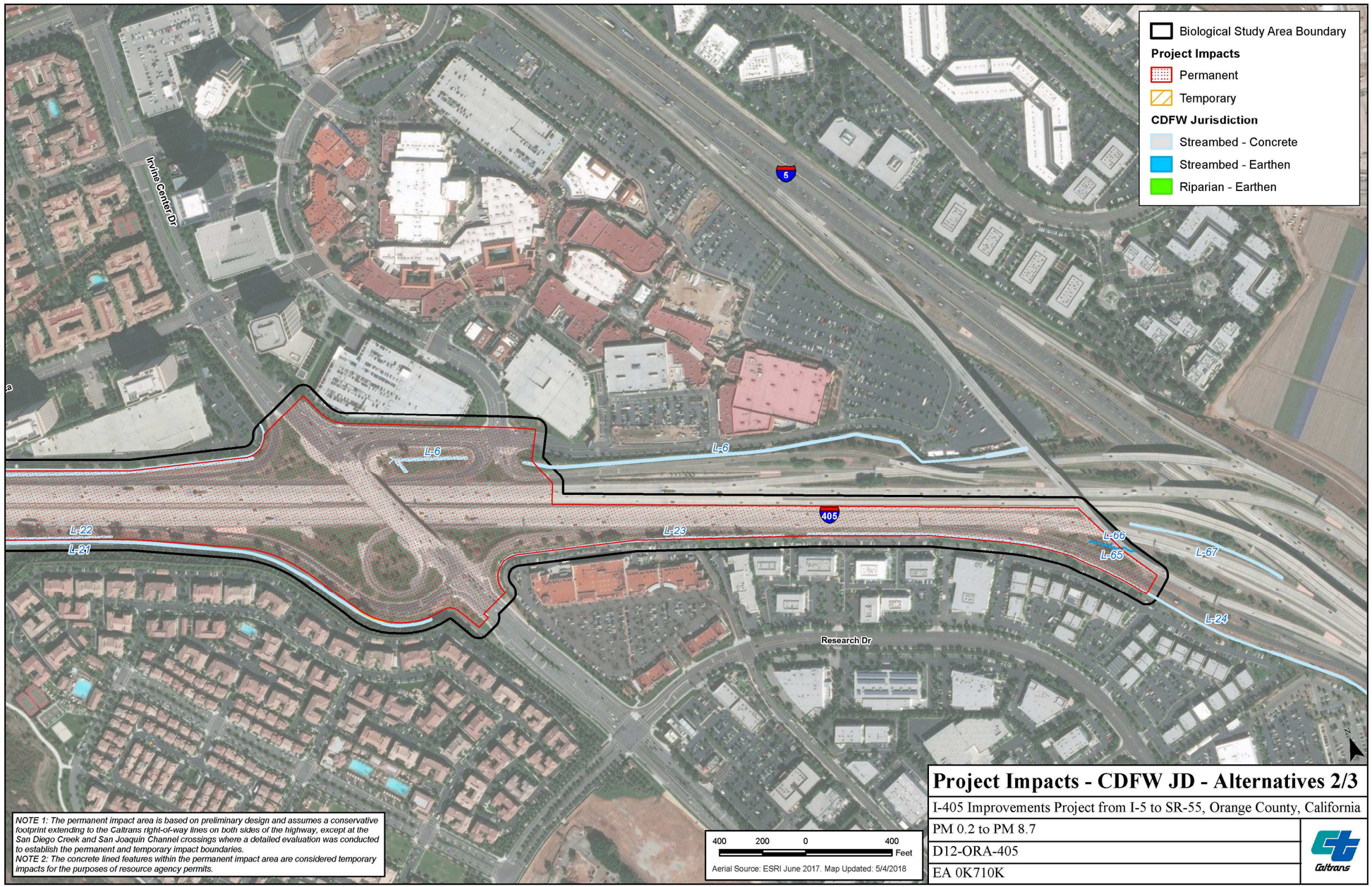

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 8 of 16)

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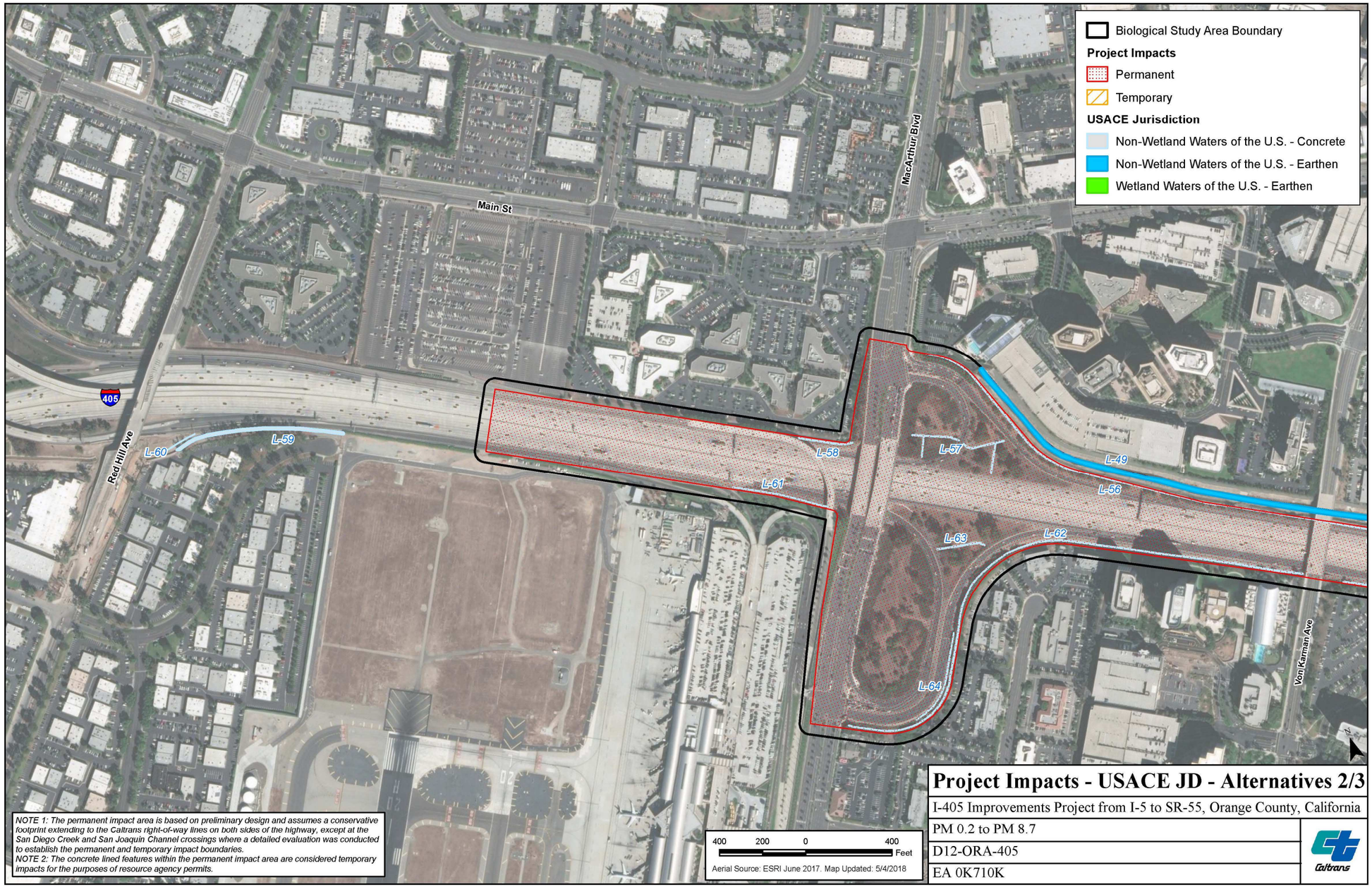

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 9 of 16)

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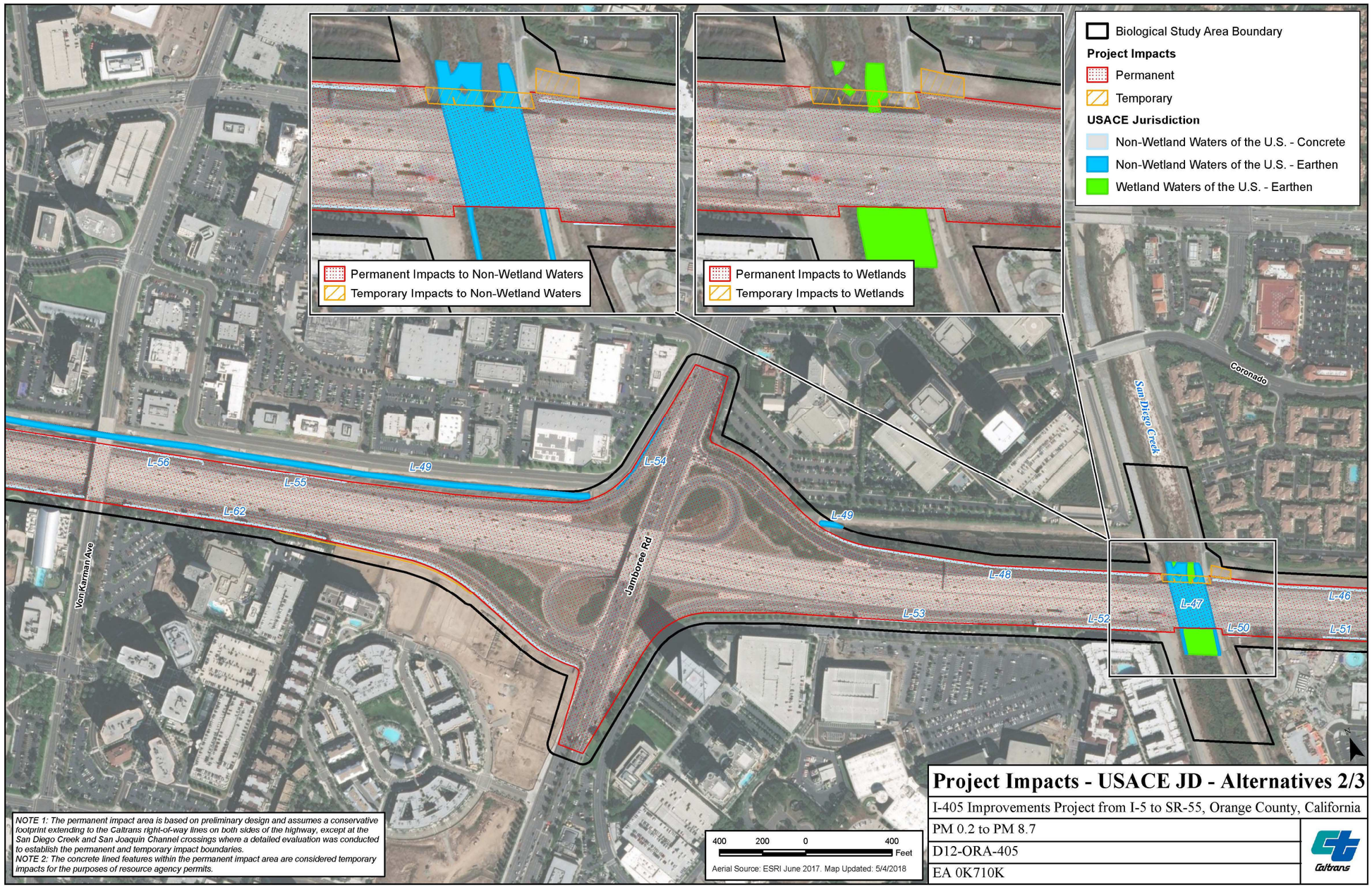

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 10 of 16)

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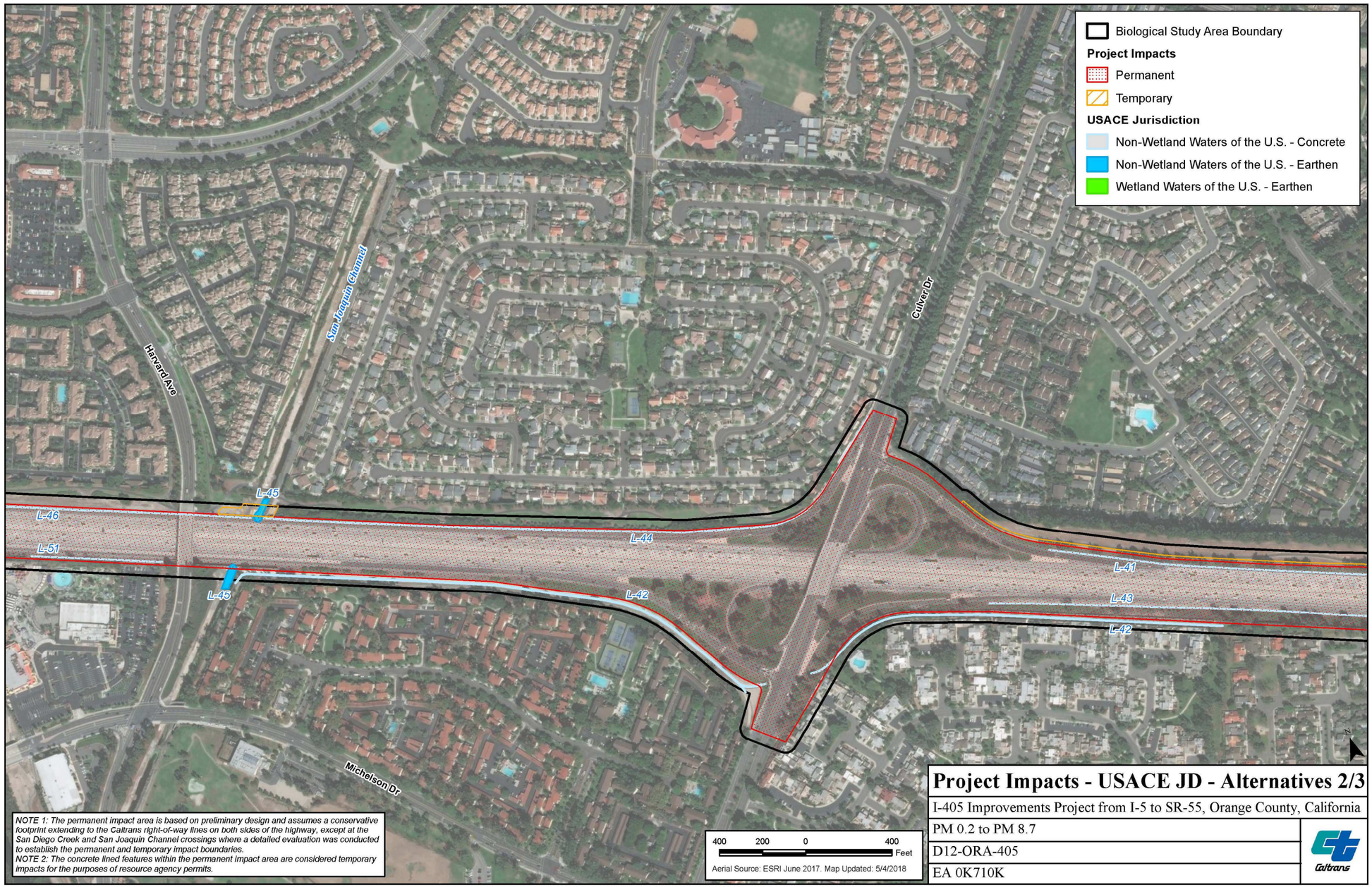

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 11 of 16)

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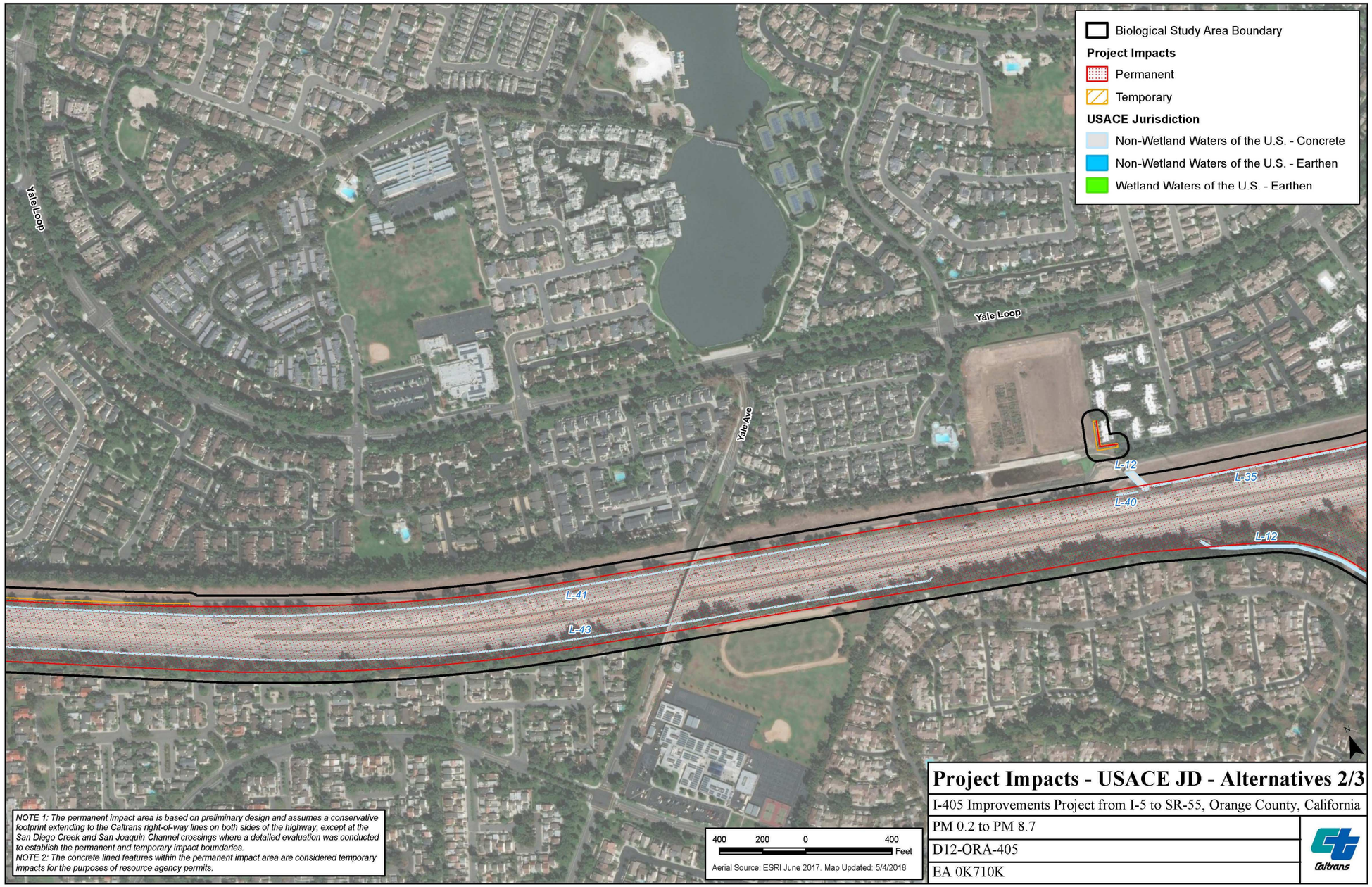

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 12 of 16)

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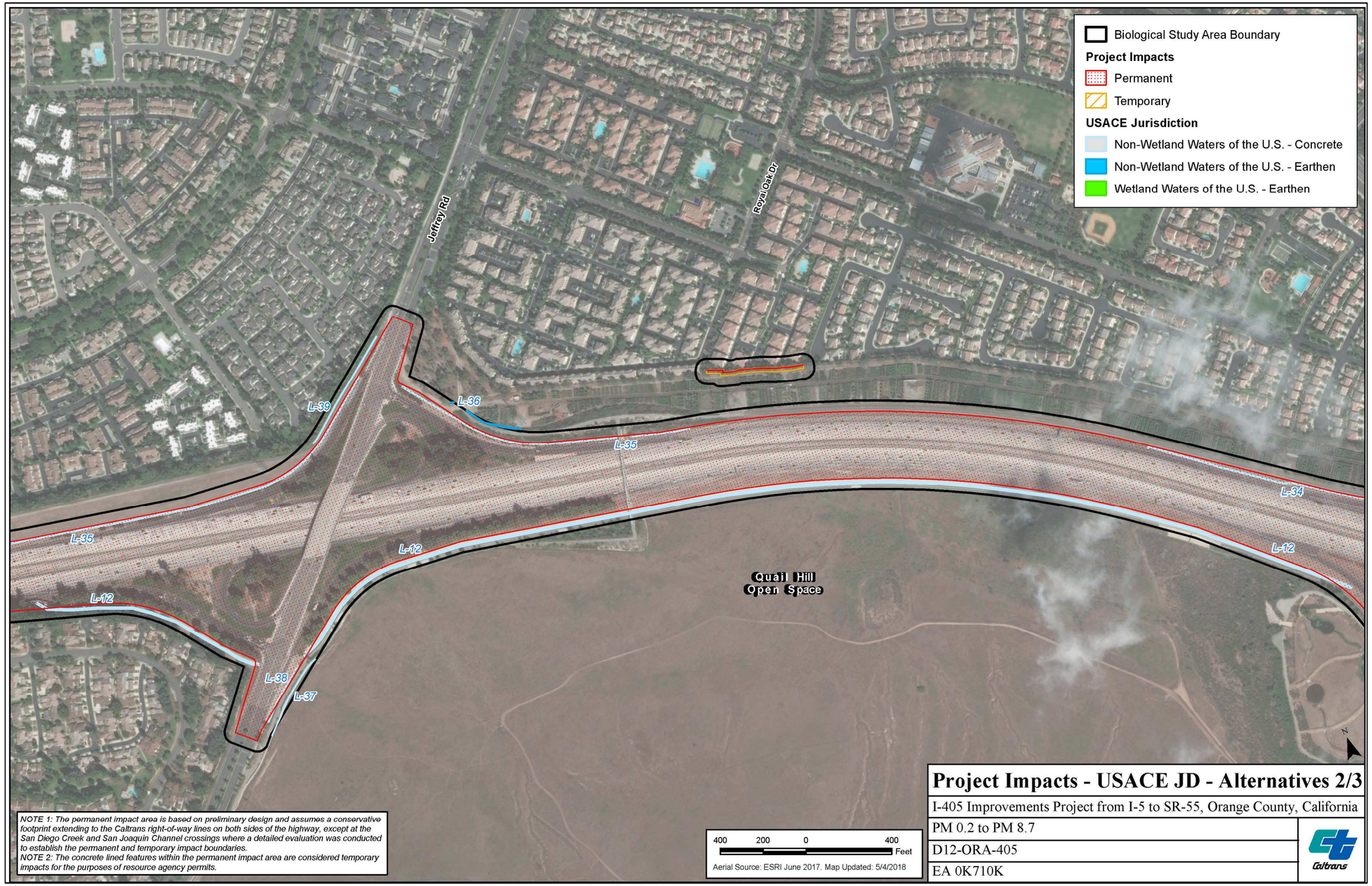

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 13 of 16)

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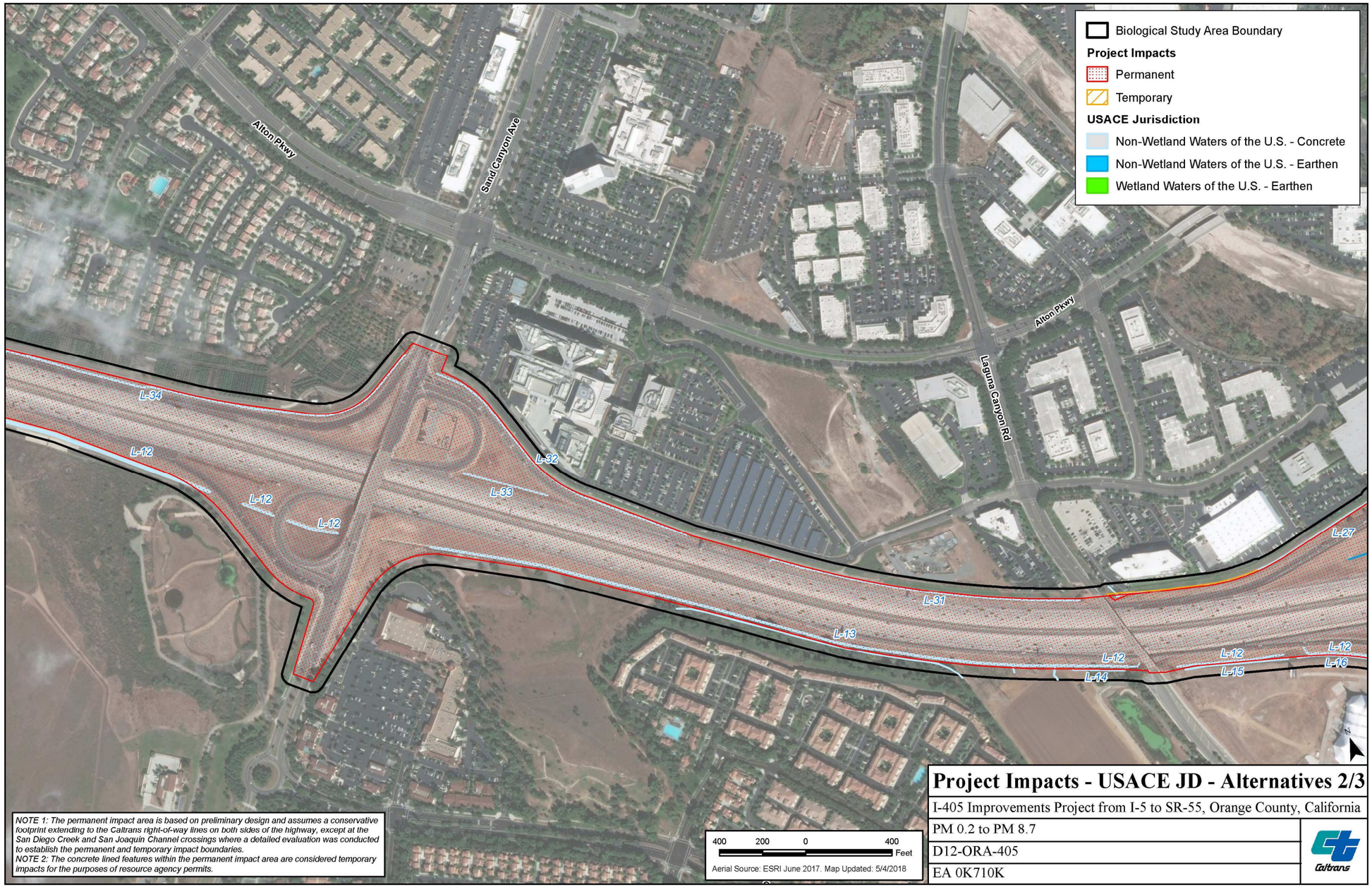

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 14 of 16)

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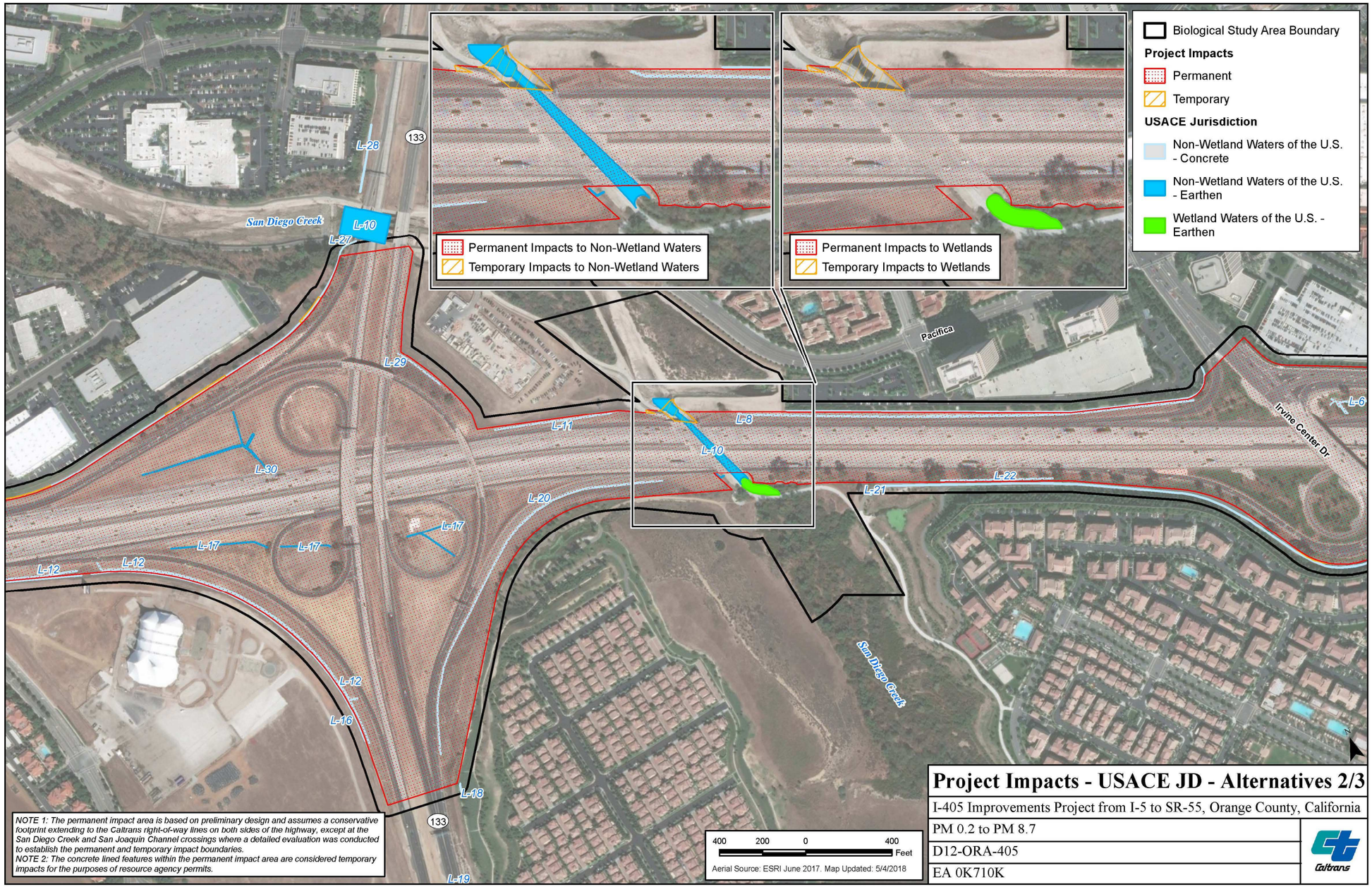

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 15 of 16)

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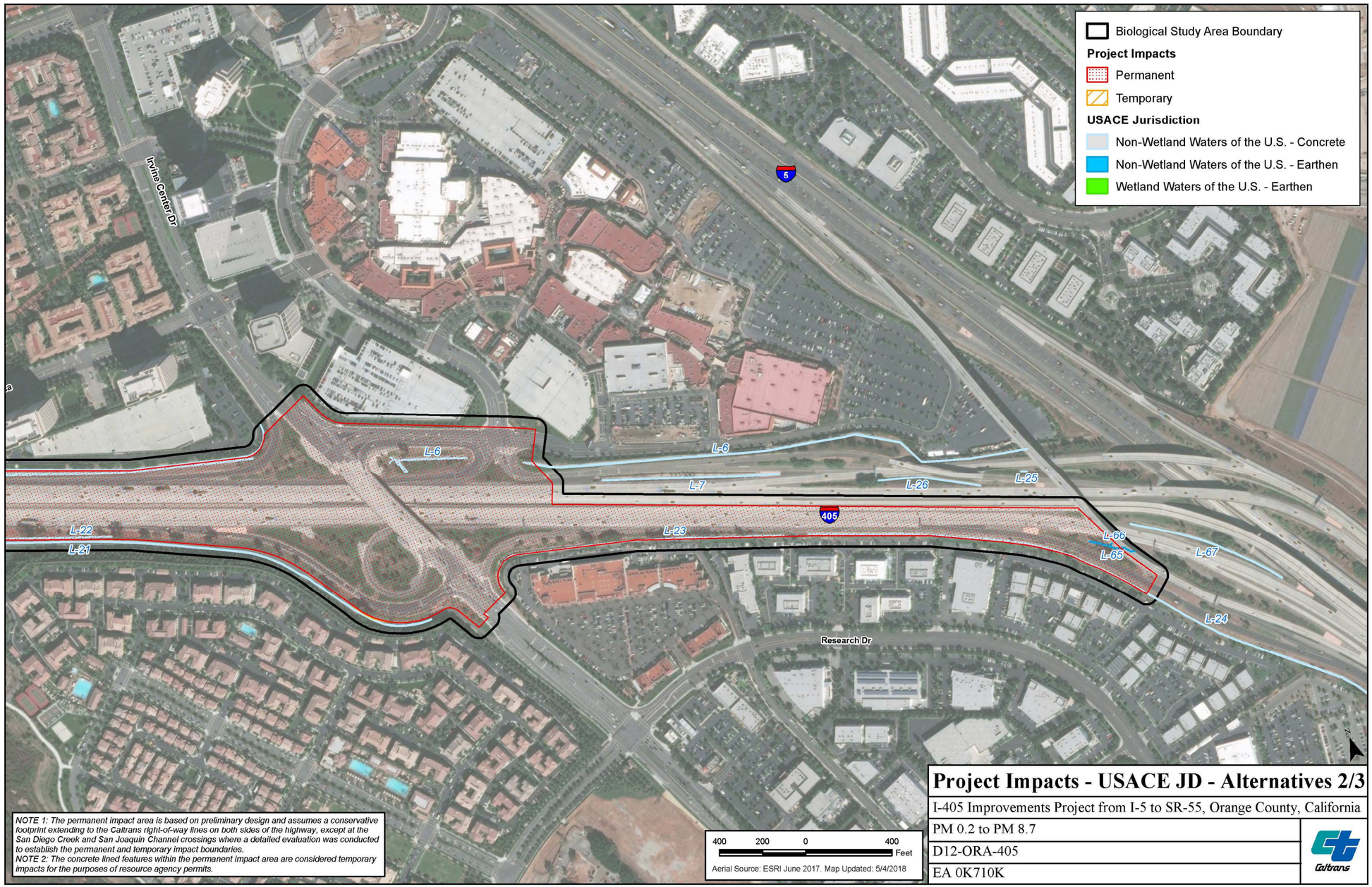

Figure 2.3.2-1. Potential Jurisdictional Areas (Sheet 16 of 16)

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Table 2.3.2-1. Jurisdictional Areas for the Project ("Project L")

Feature	Earthen or Concrete	USACE Non-wetland "Waters of the U.S." (acres)	USACE Wetland "Waters of the U.S." (acres)	CDFW Streambed (acres)	CDFW Riparian (acres)
L-1	Earthen	0.009	–	0.009	–
L-2	Concrete	0.033	–	0.098	–
L-3	Concrete	0.039	–	0.097	–
L-4	Earthen	0.194	–	0.195	0.152
L-5	Concrete	0.010	–	0.024	–
L-6	Concrete	0.185	–	0.522	–
L-7	Concrete	0.038	–	–	–
L-8	Concrete	0.146	–	0.439	–
L-9	Concrete	0.047	–	0.142	–
L-10 (San Diego Creek – South)	Earthen	1.058	0.388	1.616	0.388
L-11	Concrete	0.013	–	0.038	–
L-12	Concrete	1.893	–	5.667	–
L-13	Concrete	0.032	–	0.095	–
L-14	Concrete	0.006	–	0.017	–
L-15	Concrete	0.013	–	0.039	–
L-16	Concrete	0.037	–	0.148	–
L-17 [a]	Earthen	0.026	–	–	–
L-18	Concrete	0.003	–	0.006	–
L-19	Concrete	0.002	–	0.008	–
L-20	Concrete	0.079	–	0.188	–
L-21	Concrete	0.162	–	0.411	–
L-22	Concrete	0.012	–	0.036	–
L-23	Concrete	0.031	–	0.116	–
L-24	Concrete	0.268	–	0.537	–
L-25	Concrete	0.001	–	–	–
L-26	Concrete	0.011	–	–	–
L-27	Concrete	0.060	–	0.226	–
L-28	Concrete	0.022	–	0.089	–
L-29	Concrete	0.006	–	0.017	–
L-30	Earthen	0.070	–	–	–
L-31	Concrete	0.034	–	0.134	–
L-32	Concrete	0.033	–	0.098	–
L-33	Concrete	0.009	–	–	–
L-34	Concrete	0.092	–	0.184	–
L-35	Concrete	0.196	–	0.449	–
L-36	Earthen	0.019	–	0.026	–

Table 2.3.2-1. Jurisdictional Areas for the Project ("Project L")

Feature	Earthen or Concrete	USACE Non-wetland "Waters of the U.S." (acres)	USACE Wetland "Waters of the U.S." (acres)	CDFW Streambed (acres)	CDFW Riparian (acres)
L-37	Concrete	0.009	–	0.075	–
L-38	Concrete	0.007	–	0.027	–
L-39	Concrete	0.013	–	0.027	–
L-40	Concrete	0.002	–	0.014	–
L-41	Concrete	0.107	–	0.315	–
L-42	Concrete	0.382	–	2.373	–
L-43	Concrete	0.125	–	0.374	–
L-44	Concrete	0.128	–	0.420	–
L-45	Earthen	0.159	–	0.318	–
L-46	Concrete	0.059	–	0.212	–
L-47 (San Diego Creek- North)	Earthen	1.085	0.509	1.649	0.509
L-48	Concrete	0.070	–	0.209	–
L-49	Earthen	2.033	–	5.783	–
L-50	Concrete	0.002	–	0.007	–
L-51	Concrete	0.014	–	0.085	–
L-52	Concrete	0.013	–	0.077	–
L-53	Concrete	0.013	–	0.039	–
L-54	Earthen	0.018	–	0.123	–
L-55	Concrete	0.013	–	0.066	–
L-56	Concrete	0.059	–	0.294	–
L-57	Concrete	0.025	–	–	–
L-58	Concrete	0.012	–	0.060	–
L-59	Concrete	0.218	–	0.218	–
L-60	Concrete	0.003	–	0.007	–
L-61	Concrete	0.010	–	0.031	–
L-62	Concrete	0.226	–	0.679	–
L-63	Concrete	0.015	–	–	–
L-64	Concrete	0.011	–	0.021	–
L-65	Earthen	0.008	–	0.010	–
L-66	Earthen	0.001	–	0.001	–
L-67	Concrete	0.052	–	0.122	–
Total Earthen	**Earthen**	**4.680**	**0.897**	**9.731**	**1.048**
Total Concrete	**Concrete**	**5.095**	**0.000**	**15.575**	**0.000**
Total		**9.775**	**0.897**	**25.306**	**1.048**

Note: USACE: U.S. Army Corps of Engineers; CDFW: California Department of Fish and Wildlife
[a] The acreage for this feature was adjusted based on the verification of jurisdictional areas (Attachment E).

Source: ICF 2012, 2013; BonTerra Psomas, 2015; Parsons 2017/2018.

2.3.2.3 Environmental Consequences

Alternatives 2 and 3 would result in permanent and temporary impacts to USACE/RWQCB wetland vegetation and Waters of the U.S. mpacts to jurisdictional features are provided in Table 2.3.2-2.

Alternative 1 (No Build)

There would be no permanent impacts to jurisdictional features associated with the No Build Alternative. Permanent impacts on jurisdictional features were evaluated for each build alternative based on the current footprint of the alternatives. Some jurisdictional features within the footprint of each alternative are not anticipated to be impacted.

Construction (Short-Term) Impacts

There would be no temporary impacts to jurisdictional features from the No Build Alternative.

Build Alternative 2 (Preferred Alternative) and Build Alternative 3

The improvements proposed for the build alternatives are generally within the existing ROW; however, implementation of the build alternatives would result in permanent impacts to 0.006 acre of jurisdictional wetlands and 1.849 acres of waters of the U.S. (see Table 2.3.2-3). In addition, Alternatives 2 and 3 would have permanent impacts to 8.679 acres of features under CDFW jurisdiction, and 0.070 acre of shade impacts to riparian and streambed resources. Shade impacts would be associated with bridge widenings over the jurisdictional feature.

Construction (Short-Term) Impacts

Alternatives 2 and 3 would temporarily impact 2.607 acre of waters of the U.S. under USACE and SWRCB/RWQCB jurisdiction (Table 2.3.2-3). In addition, Alternatives 2 and 3 would temporarily impact 7.158 acre of streambeds under CDFW jurisdiction. All construction activities (including borrow, disposal, staging, and access areas) are assumed to be contained within the permanent or temporary impact areas or within existing roadways. Although the area within the ROW would be configured differently (e.g., different lane striping) for these two alternatives, Alternatives 2 and 3 have the same impact footprint with regard to biological resources.

Table 2.3.2-2. Jurisdictional Areas Impacted by Alternative 2 and Alternative 3***

Jurisdiction Type	Existing (acres)	Permanent Impact Earthen (acres)	Permanent Impact Concrete (acres)	Combined Temporary Impacts** (acres)	Temporary Impact Earthen (acres)	Temporary Impact Concrete (acres)	Shade Impact (acres)[a]	Total Impact (acres)
USACE/RWQCB Wetland "Waters of the U.S."								
L-47 (San Diego Creek - North)	0.509	0.006		0.027	0.027		N/A	0.034
TOTAL USACE/RWQCB Wetland "Waters of the U.S."	***0.509***	***0.006***		***0.027***	***0.027***		***N/A***	***0.034***
USACE/RWQCB Non-wetland "Waters of the U.S."								
L-6	0.185		0.037	0.037		0.000	N/A	0.037
L-8	0.146		0.146	0.146		0.000	N/A	0.146
L-10 (San Diego Creek - South)	1.058	0.221		0.084	0.084		N/A	0.305
L-11	0.013		0.013	0.013		0.000	N/A	0.013
L-12	1.893		0.644	0.644		0.000	N/A	0.644
L-17	0.026	0.026		0.000	0.000		N/A	0.026
L-20	0.079		0.079	0.079		0.000	N/A	0.079
L-22	0.012		0.012	0.012		0.000	N/A	0.012
L-23	0.031		0.028	0.028		0.000	N/A	0.028
L-24	0.268		0.111	0.111		0.000	N/A	0.111
L-27	0.060		0.001	0.027		0.026	N/A	0.027
L-29	0.006		0.006	0.006		0.000	N/A	0.006
L-30	0.070	0.070		0.000	0.000		N/A	0.070
L-31	0.034		0.034	0.034		0.000	N/A	0.034
L-32	0.033		0.033	0.033		0.000	N/A	0.033
L-33	0.009		0.009	0.009		0.000	N/A	0.009
L-34	0.092		0.092	0.092		0.000	N/A	0.092
L-35	0.196		0.196	0.196		0.000	N/A	0.196
L-38	0.007		0.005	0.005		0.000	N/A	0.005
L-40	0.002		0.002	0.002		0.000	N/A	0.002
L-41	0.107		0.107	0.107		0.000	N/A	0.107
L-42	0.382		0.012	0.012		0.000	N/A	0.012
L-43	0.125		0.125	0.125		0.000	N/A	0.125
L-44	0.128		0.120	0.120		0.000	N/A	0.120
L-45	0.159	0.032		0.036	0.036		N/A	0.068

Table 2.3.2-2. Jurisdictional Areas Impacted by Alternative 2 and Alternative 3***

Jurisdiction Type	Existing (acres)	Permanent Impact Earthen (acres)	Permanent Impact Concrete (acres)	Combined Temporary Impacts** (acres)	Temporary Impact Earthen (acres)	Temporary Impact Concrete (acres)	Shade Impact (acres)[a]	Total Impact (acres)
L-46	0.059		0.059	0.059		0.000	N/A	0.059
L-47 (San Diego Creek - North)	1.085	0.797		0.092	0.092		N/A	0.889
L-48	0.070		0.070	0.070		0.000	N/A	0.070
L-51	0.014		0.014	0.014		0.000	N/A	0.014
L-52	0.013		0.013	0.013		0.000	N/A	0.013
L-53	0.013		0.005	0.005		0.000	N/A	0.005
L-54	0.018	0.018		0.000	0.000		N/A	0.018
L-55	0.013		0.013	0.013		0.000	N/A	0.013
L-56	0.059		0.059	0.059		0.000	N/A	0.059
L-57	0.025		0.025	0.025		0.000	N/A	0.025
L-58	0.012		0.012	0.012		0.000	N/A	0.012
L-61	0.010		0.010	0.010		0.000	N/A	0.010
L-62	0.226		0.226	0.226		0.000	N/A	0.226
L-63	0.015		0.015	0.015		0.000	N/A	0.015
L-64	0.011		0.011	0.011		0.000	N/A	0.011
L-65	0.008	0.006		0.000	0.000		N/A	0.006
L-66	0.001	0.001		0.000	0.000		N/A	0.001
TOTAL USACE/RWQCB Non-wetland "Waters of the U.S."	*6.768*	*1.171*	*2.342*	*2.580*	*0.212*	*0.026*		*3.751*
TOTAL USACE/RWQCB	***7.277***	***1.178***	***2.342***	***2.607***	***0.239***	***0.026***		***3.785***
CDFW Riparian								
L-47 (San Diego Creek - North)	0.509	0.006		0.027	0.027		0.008	0.042
TOTAL CDFW Riparian	***0.509***	***0.006***		***0.027***	***0.027***		***0.008***	***0.042***
CDFW Streambed								
L-6	0.522		0.088	0.088		0.000	0.000	0.088
L-8	0.439		0.439	0.439		0.000	0.000	0.439
L-9	0.142		0.000	0.000		0.000	0.000	0.000
L-10 (San Diego Creek - South)	1.616	0.550		0.182	0.182		0.000	0.732
L-11	0.038		0.038	0.038		0.000	0.000	0.038
L-12	5.667		1.705	1.705		0.000	0.000	1.705

Table 2.3.2-2. Jurisdictional Areas Impacted by Alternative 2 and Alternative 3***

Jurisdiction Type	Existing (acres)	Permanent Impact Earthen (acres)	Permanent Impact Concrete (acres)	Combined Temporary Impacts** (acres)	Temporary Impact Earthen (acres)	Temporary Impact Concrete (acres)	Shade Impact (acres)[a]	Total Impact (acres)
L-16	0.148		0.003	0.003		0.000	0.000	0.003
L-20	0.188		0.188	0.188		0.000	0.000	0.188
L-22	0.036		0.036	0.036		0.000	0.000	0.036
L-23	0.116		0.098	0.098		0.000	0.000	0.098
L-24	0.537		0.258	0.258		0.000	0.000	0.258
L-27	0.226		0.004	0.105		0.101	0.000	0.105
L-29	0.017		0.017	0.017		0.000	0.000	0.017
L-31	0.134		0.134	0.134		0.000	0.000	0.134
L-32	0.098		0.098	0.098		0.000	0.000	0.098
L-34	0.184		0.184	0.184		0.000	0.000	0.184
L-35	0.449		0.449	0.449		0.000	0.000	0.449
L-38	0.027		0.022	0.022		0.000	0.000	0.022
L-40	0.014		0.014	0.014		0.000	0.000	0.014
L-41	0.315		0.315	0.315		0.000	0.000	0.315
L-42	2.373		0.082	0.082		0.000	0.000	0.082
L-43	0.374		0.374	0.374		0.000	0.000	0.374
L-44	0.420		0.369	0.369		0.000	0.000	0.369
L-45	0.318	0.049		0.090	0.090		0.000	0.139
L-46	0.212		0.212	0.212		0.000	0.000	0.212
L-47 (San Diego Creek - North)	1.649	1.075		0.134	0.134		0.062	1.271
L-48	0.209		0.209	0.209		0.000	0.000	0.209
L-49	5.783	0.038		0.000	0.000		0.000	0.038
L-50	0.007		0.000	0.000		0.000	0.000	0.000
L-51	0.085		0.085	0.085		0.000	0.000	0.085
L-52	0.077		0.077	0.077		0.000	0.000	0.077
L-53	0.039		0.013	0.013		0.000	0.000	0.013
L-54	0.123	0.121		0.000	0.000		0.000	0.121
L-55	0.066		0.066	0.066		0.000	0.000	0.066
L-56	0.294		0.283	0.283		0.000	0.000	0.283

Table 2.3.2-2. Jurisdictional Areas Impacted by Alternative 2 and Alternative 3***

Jurisdiction Type	Existing (acres)	Permanent Impact Earthen (acres)	Permanent Impact Concrete (acres)	Combined Temporary Impacts** (acres)	Temporary Impact Earthen (acres)	Temporary Impact Concrete (acres)	Shade Impact (acres)[a]	Total Impact (acres)
L-58	0.060		0.060	0.060		0.000	0.000	0.060
L-61	0.031		0.031	0.031		0.000	0.000	0.031
L-62	0.679		0.679	0.679		0.000	0.000	0.679
L-64	0.021		0.021	0.021		0.000	0.000	0.021
L-65	0.010	0.009		0.000	0.000		0.000	0.009
L-66	0.001	0.001		0.000	0.000		0.000	0.001
TOTAL CDFW Streambed	***23.744***	***1.842***	***6.651***	***7.158***	***0.406***	***0.101***	***0.062***	***9.062***
TOTAL CDFW	**24.253**	**1.849**	**6.651**	**7.185**	**0.433**	**0.101**	**0.070**	***9.104***

Note: Impacts were calculated by reviewing Project design plans with jurisdictional features mapped by ICF 2012, 2013a, 2013b with updates from BonTerra Psomas 2015 and from Parsons 2017.
***For the purposes of resource agency permits, permanent impacts to concrete lined features are considered temporary.
**This includes the acreages calculated for the following three calculations: (1) Permanent Impact Concrete, (2) Temporary Impact Earthen, and (3) Temporary Impact Concrete.
[a] Areas impacted by shade would also be temporarily impacted for construction access.
Italicized numbers are the subtotal of all numbers in that category.

Table 2.3.2-3. Summary of Jurisdictional Areas Impacted by Alternative 2***

Jurisdiction Type	Existing (acres)	Permanent Impact Earthen (acres)	Permanent Impact Concrete (acres)	Combined Temporary Impacts** (acres)	Temporary Impact Earthen (acres)	Temporary Impact Concrete (acres)	Shade Impact (acres)[a]	Total Impact (acres)
TOTAL USACE/RWQCB Wetland "Waters of the U.S."	0.509	0.006	0.000	0.027	0.027	0.000	N/A	0.034
TOTAL USACE/RWQCB Non-wetland "Waters of the U.S."	6.768	1.171	2.342	2.580	0.212	0.026	N/A	3.751
TOTAL USACE/RWQCB	**7.277**	**1.178**	**2.342**	**2.607**	**0.239**	**0.026**	N/A	**3.785**
TOTAL CDFW Riparian	0.509	0.006	0.000	0.027	0.027	0.000	0.008	0.042
TOTAL CDFW Streambed	23.744	1.842	6.651	7.158	0.406	0.101	0.062	9.062
TOTAL CDFW	**24.253**	**1.849**	**6.651**	**7.185**	**0.433**	**0.101**	**0.070**	**9.104**

Note: Impacts were calculated by reviewing Project design plans with jurisdictional features mapped by ICF 2012, 2013a, 2013b with updates from BonTerra Psomas 2015 and from Parsons 2017/2018.
[a] Areas impacted by shade would also be temporarily impacted for construction access
***For the purposes of resource agency permits, permanent impacts to concrete lined features are considered temporary.
**This includes the acreages calculated for the following three calculations: (1) Permanent Impact Concrete, (2) Temporary Impact Earthen, and (3) Temporary Impact Concrete.

Construction of the project would include use of heavy equipment to clear vegetation and grade the project site. This activity would create noise, dust, and vibration that could adversely affect riparian habitat and streambed next to the construction site. Silt runoff from the project site or improper disposal of petroleum and chemical products from construction equipment could adversely affect water quality during construction. Adverse effects on water quality could affect plants, animals, and habitats downstream of construction areas, including areas along the San Diego Creek. If construction limits are not clearly marked, construction operators could inadvertently remove habitat that should not be removed. Temporary impacts on the riparian habitat and streambed due to project construction may be minimized with the implementation of the measures described in Section 2.3.2.4, Avoidance, Minimization, and/or Mitigation Measures.

Least Environmentally Damaging Practicable Alternative (LEDPA)

Alternatives 2 and 3 would both result in 2.607 acre of temporary impacts and 0.006 acre of permanent impacts to jurisdictional wetlands. Given that both alternatives would result in the same impacts to wetlands and given that Alternative 1 (No Build Alternative) would not meet the purpose and need of the proposed project, making it impracticable, no LEDPA is identified.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

To avoid and minimize impacts on jurisdictional features, the following measures, which were previously described, will be implemented:

- BIO-1: Delineation of ESAs
- BIO-2: Onsite Training
- BIO-3: Avoidance of Breeding Season
- BIO-23: Use of BMPs during Construction

In addition, it is anticipated that Caltrans/OCTA will follow the LOP procedures established for OCTA M2 Freeway Program projects, including compensatory mitigation activities to offset unavoidable impacts to riparian habitats (i.e., waters under jurisdiction of USACE, CDFW, and SWRCB/RWQCB). Caltrans/OCTA will submit an application to USACE and will obtain authorization under the established LOP procedures. USACE will notify other federal and State agencies of the submitted application and, if it is determined to be eligible as meeting all LOP procedure requirements, USACE will issue an LOP authorization for project impacts to waters of the U.S. The LOP application will include information clearly demonstrating that impacts to aquatic resources will be avoided and minimized to the

maximum extent practicable. It will also include a mitigation statement and either an approved Habitat Mitigation and Monitoring Program (HMMP), Long-Term Resource Management Plan (LTRMP), or payment to a USACE-approved In-Lieu Fee Program (ILFP). The mitigation presented will compensate for project impacts and will result in a net increase in aquatic resource functions. USACE will determine whether project impacts can be authorized under established LOP procedures; whether additional special conditions will be required; or whether authorization under another USACE permit type will be required. Caltrans/OCTA will obtain the LOP and/or other required USACE permit prior to impacting areas under jurisdiction of USACE, CDFW, and RWQCB (i.e., riparian habitats) and will implement the approved mitigation plan.

Wetlands Only Practicable Alternative Finding

Alternative 2 (Preferred Alternative) would result in 0.006 acre of permanent impacts to jurisdictional wetlands. Alternatives 2 and 3 share the same impact footprint, while Alternative 1 (No Build Alternative) would not adequately meet the purpose and need of the proposed project. Pursuant to EO 11990, federal agencies, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm.

No practicable alternatives for the proposed project were identified given that Alternatives 2 and 3 would result in the same permanent impacts to jurisdictional wetlands. All practicable measures to minimize harm to wetlands will be taken. Refer to Section 2.3.2.4, Avoidance, Minimization, and/or Mitigation Measures for all proposed measures to minimize impacts to jurisdictional features, including wetlands.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.